Brief History of the Calvert Vaux Park Site

The site of the Calvert Vaux Park, for the most part, did not exist prior to the early 1960's. A single narrow peninsula generally centered on Bay 45th Street extended out about three-quarters of the distance of the existing park. An aerial photo dated 1954 obtained from the USGS indicates this peninsula may have been used as a salvage yard (see Figure 1-2). A number of barges appear to be moored on the north side of the peninsula.

NYC DPR's property information shows that the original park was acquired by the City in 1933 when the German Home for Recreation of Women and Children, donated the land currently occupied by Dreier Offerman Park on the east side of the Shore Parkway as well as the peninsula of land that extended into Gravesend Bay, now known as Calvert Vaux Park, for the purpose of establishing a park (see Figure 1-3). In 1944, when the Shore Parkway/ Belt Parkway was constructed, the park was divided into two segments , as the po11ion now occupied by the right of way of the Belt Parkway was demapped and transferred to the Highway Department. In the early I 960's the site of Calvert Vaux Park was used as a dredge and excavation disposal area for the construction of the Verrazano Narrows Bridge. The new landfill started at the existing shoreline (which was adjacent to the eastbound lanes of the Belt/Shore Parkway service road) and extended out as far as 2,600 feet from the originally existing shoreline. The land fill area was encompassed by a rip-rap wall to contain the dredged and excavated materials. The acreage of the new landfill area totaled approximately 73 acres when the land filling was completed. This park addition was approved by the Board of Estimate in 1962.

Until 1998 both parcels on either side of the Belt Parkway were known as Dreier Offerman Park. By Executive Decree the Parks Commissioner renamed the portion west of the Belt Parkway as Calvert Vaux Park on March 26, 1998 .

Much of the park is situated 15 feet above mean sea level. The transition from tidal flats to the average park elevation is quite abrupt at the high tide line ; with near vertical walls of fill material the norm. The historically deposited fill rises quickly from the shoreline, further shaped by erosive forces over the years. The majority of the fill material that forms the southeastern shore is relatively protected from wave action and the prevailing west wind. Therefore the southeastern shoreline and fill slope are covered with ground vegetation and include interstitial soil material filling the gaps amidst large irregular concrete blocks and boulders. In contrast, the western shoreline of the park is windswept with limited shoreline vegetation and typical large boulders and fill fragments with minimal soil surrounding them. The western shoreline is a high energy environment, limiting the deposition of the fine soil particles that might support rooted vegetation. The break between these two systems is generally marked by the westernmost group of scuttled barges that can be seen in the site aerial photograph (See Figure 1-1). Intertidal marsh is absent from the site perimeter tidal wetlands to the northwest of this barge cluster.

The south and southeastern shoreline along the Coney Island Creek outlet contains exposed mud and sand flats at low tide that are unvegetated. These coastal flats/shoals grade up into a narrow intertidal marsh zone along much of the shoreline with dense stands of low marsh cordgrass (Spartina alterniflora). The cordgrass stands are primarily pockets, interrupted by shoreline sections with unfavorable grades and/or substrate as shown in Photo 2 in Appendix 2. This area is the subject of a separate tidal wetland restoration project that will greatly enhance the existing tidal wetland features of the site.

Pockets of high marsh occur along this section of shoreline e. These pockets are characterized by a narrow (ie. less than 3 feet wide) band of high marsh chordgrass *(Spartina patens)* and a dense thicket of marsh elder *(Jvafrutescens).* Less than 10% of the shoreline contains a high marsh due primarily to the extreme topography created by the fill and the lack of suitable soil. Where the slope above the low marsh is 2:1 or less, and a fine grained substrate is present, the high marsh species are typically present. Where concrete rubble dominates the substrate, high marsh species are absent. This south and southeastern tidal wetland area can be generally classified as an estuarine environment with tidally influence emergent vegetation.

The west and northwestern shoreline contains no high or low marsh. The unconsolidated shoreline is dominated by large pieces of fill debris with little vegetation as shown in Photo 3. Below the low tide line, some rockweed *(Fucus* sp.) and sea lettuce (*Ulva lactuca)* is present. This shoreline is exposed to high winds and wave energy removing all but the larger substrate. There is a near vertical wall of fill material at the upper limit of the wave zone caused by the erosion of the fill. The roots of upland vegetation provide stability for this soil, but further erosion would likely occur as a result of severe

wave action during high tide. This section of the site could be generally characterized as an estuarine environment with an unconsolidated shoreline subject to tidal action.

The genesis of the land area that includes Calvert Vaux Park is fill material transported from off-site and deposited within Gravesend Bay. The portion of the bay where the fill was deposited appears to have been both intertidal mudflats and deeper water habitat as observed from the existing shoreline. Therefore the shoreline of the park is subject to the ebb and flow of the tide. The average elevation of the park is approximately 15 ft. above mean sea level. Apparent groundwater seeps were noted in several locations along the shoreline. These seeps likely originate from precipitation that infiltrates the on-site soils. The site interior is relatively level, with high porosity soils. Infiltration appears to be rapid, resulting in groundwater pressure that seeps out of the surrounding steep banks bordering the tidal areas. At low tide, the frequency and strength of these seeps are quite evident.

Two culvert end sections were identified within the park boundaries. One is located at the eastern end of the drainage ditch along the northern park boundary . The second culvert is located in the intertidal zone at the extreme northeastern end of the cove located on the southeastern side of the park. At low tide flow was evident from the northeastern culvert into the tidal area.

In an interview on January 8, 2008, Mr. Martin Maher, Chief of Staff for the Brooklyn Parks Department, provided a **4**

history of the subject property, including the following:

The main portion of the park, comprising the subject property, was constructed from construction spoils from the Verrazano Narrows Bridge, including spoils from an earlier, abandoned, tunnel project in the same location. The spoils included excavation of Fort Lafayette at the site of the Brooklyn pier, possibly including materials from 19th and early 20th century military installations ... Sunken barges dating from World War I and II, such as the ones presently visible adjacent to the subject property, have typically been used to form the bulwarks for made land in Gravesend Bay ....During the 1960s and early 1970s the grounds were unguarded and subject to frequent unauthorized dumping.

According to a description of the construction of the Verrazano-Narrows Bridge in *"In the Wake of Tacoma"* (Richard Scott, ASCE Press 2001):

In spite of its tremendous size and weight, the Verrazano-Narrows Bridge is not founded on rock ... the Brooklyn

caisson obliterated a reef that had served ... as a naval magazine, and, in World War I, as an ammunition dump."

A historical aerial photo from 1955 shows at least thirty barges adjacent to the subject property; some appear to be partly incorporated into the fill forming the property.

Copies of historical Sanborn Fire Insurance Maps dated 1906, 1929, 1950 and 1968 were obtained from EDR. The subject property is depicted as ocean (Gravesend Bay) on all of these maps, with the exception of the maps for I 968, six years after the land was created and the park established, according to the NYC Parks Department. The six 1968 maps are inconsistent in their depiction of the subject property, with some showing it still as part of Gravesend Bay and others showing land. One map depicts a one to two-story building with sections labeled "shop" and "office" at the (dashed) extension of Bay 46th Street, which corresponds to the location of a pier depicted in earlier maps. This building is labeled

with the current Calvert Vaux Park address (2000 Shore Parkway). The same map has a partly illegible label on the land west of the building that says, in part, "Junk and Salvage", possibly followed by an abbreviation for "storage".

Historical aerial photos from 1978 and 1984 show semi-regular arrays of debris scattered throughout the undeveloped portions of property, along with debris piles.